

AMENDMENT TO THE CLAIMS

1. (currently amended): A method for cleaning an article containing contaminants comprising:
 - (a) providing a zeotropic solvent composition comprising at least one flammable solvent having a boiling point at a first pressure, at least one first nonflammable solvent having a boiling point lower than said flammable solvent boiling point at said first pressure, and at least one second nonflammable hydrofluorocarbon or hydrofluoroether solvent having a boiling point higher than said flammable solvent boiling point at said first pressure; and
 - (b) contacting the article with said zeotropic solvent composition to remove at least a portion of the contaminants from said article.
2. (previously presented): The method of claim 1 wherein said contacting comprises contacting the article with a stream comprising said zeotropic composition.
3. (previously presented): The method of claim 2 wherein said contacting comprises passing said stream across the article.
4. (previously presented): The method of claim 1 wherein said contacting comprises immersing the article in said zeotropic solvent composition.

5. (previously presented): The method of claim 1 wherein said providing comprises providing a liquid phase comprising said zeotropic solvent composition and providing a vapor phase comprising said zeotropic solvent composition, and said contacting comprises immersing the article in said liquid phase and in said vapor phase.
6. (previously presented): The method of claim 1 wherein said contacting comprises spraying the article with said zeotropic solvent composition.
7. (previously presented): The method of claim 2 wherein said zeotropic solvent composition is in vapor phase for at least a portion of the contacting.
8. (previously presented): The method of claim 1 wherein at least a portion of the contacting is conducted in a vapor degreaser.
9. (original): The method of claim 1 wherein said flammable solvent is selected from the group consisting of isomers of HFC-365, methylal, ethylal, cis and trans dichloroethylene, isopropyl chloride, pentane and other C₁-C₂₀ hydrocarbons, C₁-C₂₀ hydrocarbon alcohols, and C₁-C₂₀ hydrocarbon ketones.

10. (original): The method of claim 1 wherein said flammable solvent comprises trans-1,2-dichloroethylene.
11. (currently amended): The method of claim 1 wherein said at least one second nonflammable solvent is selected from the group consisting of HFC-4310, HFE-7100, and HFE-7200 and said at least one first nonflammable solvent at least one said nonflammable solvents is selected from the group consisting of HFC-245fa and other isomers of HFC-245, isomers of HFC-236, isomers of HFC-356, HFC-4310, HCFC-141b, isomers of HCFC-225, isomers of HCFC-123, isomers of HCFC-124, HFE-7100, HFE-7200, trichloroethylene, perchloroethylene, n-propyl bromide, and nonflammable fluoroiodocarbons.
12. (original): The method of claim 10 wherein said at least one first nonflammable solvent comprises HFC-245fa.
13. (original): The method of claim 10 wherein said at least one second nonflammable solvent comprises HFE-7100.
14. (original): The method of claim 12 wherein said at least one second nonflammable solvent comprises HFE-7100.

15. (currently amended): A zeotropic solvent composition comprising in a zeotropic relationship:
 - (a) at least one flammable solvent having a boiling point at a first pressure;
 - (b) at least one first nonflammable solvent having a boiling point that is lower than said flammable solvent boiling point at said first pressure; and
 - (c) at least one second nonflammable hydrofluorocarbon or hydrofluoroether solvent having a boiling point that is higher than said flammable solvent boiling point at said first pressure.
16. (original): The composition of claim 15 wherein said flammable solvent is an azeotropic combination of at least two compounds.
17. (original): The composition of claim 15 wherein at least one of said nonflammable solvents is an azeotropic combination of at least two compounds.
18. (original): The composition of claim 15 wherein said flammable solvent is selected from the group consisting of isomers of HFC-365, methylal, ethylal, cis and trans dichloroethylene, isopropyl chloride, pentane and other C₁-C₂₀ hydrocarbons, C₁-C₂₀ hydrocarbon alcohols, and C₁-C₂₀ hydrocarbon ketones.

19. (original): The composition of claim 15 wherein said flammable solvent comprises trans-1,2-dichloroethylene.
20. (currently amended): The composition of claim 15 wherein said at least one second nonflammable solvent is selected from the group consisting of HFC-4310, HFE-7100, and HFE-7200 and said at least one first nonflammable solvent at least one said nonflammable solvents is selected from the group consisting of HFC-245fa and other isomers of HFC-245, isomers of HFC-236, isomers of HFC-356, HFC-4310, HCFC-141b, isomers of HCFC-225, isomers of HCFC-123, isomers of HCFC-124, HFE-7100, HFE-7200, trichloroethylene, perchloroethylene, n-propyl bromide, and nonflammable fluorocarbons.
21. (original): The composition of claim 15 wherein said at least one first nonflammable solvent comprises HFC-245fa.
22. (original): The composition of claim 15 wherein said at least one second nonflammable solvent comprises HFE-7100.
23. (original): The composition of claim 21 wherein said at least one second nonflammable solvent comprises HFE-7100.

24. (original): The composition of claim 15 wherein said first pressure is about one atmosphere.
25. (original): A sprayable composition comprising a composition according to claim 15.
26. (currently amended): A method for cleaning an article containing contaminants comprising vapor degreasing said article in the substantial absence of any flammable vapor or liquid phase, the method comprising:
 - (a) providing a zeotropic solvent composition comprising at least one flammable solvent having a boiling point at a first pressure, at least one first nonflammable solvent having a boiling point lower than said flammable solvent boiling point at said first pressure, and at least one second nonflammable hydrofluorocarbon or hydrofluoroether solvent having a boiling point higher than said flammable solvent boiling point at said first pressure; and
 - (b) contacting the article with said zeotropic solvent composition to remove at least a portion of the contaminants from said article.
27. (original): The method of claim 26 wherein said first pressure is about one atmosphere.

28. (previously presented): The method of claim 26 wherein said contacting comprises immersing the article in a said zeotropic solvent composition.
29. (previously presented): The method of claim 26 wherein said providing comprises providing a liquid phase comprising said zeotropic solvent composition and providing a vapor phase comprising said zeotropic solvent composition, and said contacting comprises immersing the article in said liquid phase and in said vapor phase.
30. (previously presented): The method of claim 26 wherein said contacting comprises spraying the article with said zeotropic solvent composition.
31. (original): The method of claim 26 wherein said flammable solvent is selected from the group consisting of isomers of HFC-365, methylal, ethylal, cis and trans dichloroethylene, isopropyl chloride, pentane and other C₁-C₂₀ hydrocarbons, C₁-C₂₀ hydrocarbon alcohols, and C₁-C₂₀ hydrocarbon ketones.
32. (original): The method of claim 26 wherein said flammable solvent comprises trans-1,2-dichloroethylene.
33. (currently amended): The method of claim 26 wherein said at least one second nonflammable solvent is selected from the group consisting of

HFC-4310, HFE-7100, and HFE-7200 and said at least one first nonflammable solvent at least one said nonflammable solvents is selected from the group consisting of HFC-245fa and other isomers of HFC-245, isomers of HFC-236, isomers of HFC-356, HFC-4310, HCFC-141b, isomers of HCFC-225, isomers of HCFC-123, isomers of HCFC-124, HFE-7100, HFE-7200, trichloroethylene, perchloroethylene, n-propyl bromide, and nonflammable fluoroiodocarbons.

34. (original): The method of claim 26 wherein said at least one first nonflammable solvent comprises HFC-245fa.
35. (original): The method of claim 26 wherein said at least one second nonflammable solvent comprises HFE-7100.
36. (original): The method of claim 34 wherein said at least one second nonflammable solvent comprises HFE-7100.